

REMARKS

Favorable consideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 18-21 are pending in the present application, Claims 1-17 canceled, and Claims 18-21 added by way of the preliminary amendment.

New Claims 18-21 correspond to Claims 14-17 previously pending in parent Application Serial No. 09/268,645 filed on March 16, 2002. No new matter is added.

In an Office Action dated May 22, 2003 in parent Application Serial No. 09/268,645, then pending Claims 6, 9-11 and 18 were rejected under 35 U.S.C. § 112, first paragraph; Claims 1 and 14-17 were rejected under 35 U.S.C. § 102(e) as being anticipated by Camus (U.S. Patent No. 6,021,210); Claims 3 and 4 were rejected under 35 U.S.C. § 102(b) as being anticipated by Yang (U.S. Patent No. 5,754,511); Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Murakami (U.S. Patent No. 4, 967,276); Claims 6, 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Camus in view of Flom (U.S. Patent No. 4, 641,349); and Claims 7-11 and 18 were indicated as allowable.

In response to the objection to the drawings, specification, and title presented in the Office Action of January 3, 2003 for parent Application Serial No. 09/268,645, the specification and title are hereby amended consistent with the amendment filed on April 1, 2003 in the parent application. In addition, the specification is hereby amended to identify this application as a divisional application of parent Application Serial No. 09/268,645. No new matter is added.

Briefly recapitulating, Claims 18 and 19 are directed to an information input methods, respectively comprising the steps of: a) detecting a light image reflected by an object of the emitted light with an image sensor comprising first cells configured to pick up at an emission time and second cells configured to pick up at a non-emission time, said first and second cells arranged two-dimensionally; and b) detecting an image of an object in the received reflected light with an image sensor comprising first cells configured to pick up at an emission time and second cells configured to pick up at a non-emission time, said first and second cells arranged two-dimensionally. Claims 20 and 21 are directed to articles of manufacture corresponding to the methods of Claims 18-19, respectively.

Camus discloses a video camera comprising a controller 8 and at least one illuminator 6.¹ However, Camus does not teach or suggest detecting an image with ‘an image sensor comprising first cells configured to pick up at an emission time and second cells configured to pick up at a non-emission time, said first and second cells arranged two-dimensionally’ as recited in Applicants’ Claim 18. In Camus, an image is formed when the light source emits light and an image formed when the light source does not emit light are switched from one to the other, using an even field and an odd field. Since one video image frame is made up of two fields, the image formed when the light source emits light and the image formed when the light source does not emit light appear in one frame in such a manner that they alternately appear line by line. The pixels of a frame image are picture elements of a produced image and do not have one-to-one correspondence to each cell of the image pickup device. In general, in a video camera employing a solid-state image sensing device, the number of cells is equal to the number of pixels contained in a frame image. When a field is output, the

¹ Camus, column 3, lines 9-17.

corresponding two lines are added together. When the even field and the odd field are output, they are shifted from each other in such a manner that the lines to be added are alternately arranged. In Camus, the mode in which light is emitted and the mode in which no light is emitted are distinguished from each other based only on the images output from the sensor. In contrast, in the present invention, the cells used when light is emitted (first cells) and the cells used when no light is emitted (second cells) are driven independently of each other, and two kinds of image are allowed to be present in the sensor. This allows for easier and more cost effective high-level image processing and extraction from backgrounds.²

Applicants have also considered the Murakami, Yang, and Flom references and submit that these references also do not cure the deficiencies of Camus. Therefore, Applicants submit the inventions defined by Claims 18-21 are neither anticipated nor rendered obvious by the asserted prior art for at least the reasons stated above.³

² Specification, page 10, lines 21- page 11, line 4.

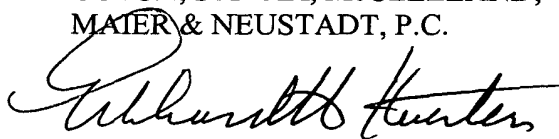
³ MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest **all** the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

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Accordingly, in view of the present amendment and in light of the previous discussion, it is respectfully submitted that the application is believed in condition for allowance and early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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